

## ABSTRACT

A dual rotation paddlewheel includes tangs that are equally effective in either direction of rotation. The paddlewheel includes tangs disposed around an outer periphery of a body. The dual rotation paddlewheel includes a primary face for use in a first direction and a secondary face for use in a second rotation direction. The tangs may also include a crossbar for increased shear strength. The increased cross sectional area eliminates problems associated with breaking tangs off of the paddlewheel and entering the product stream. Existing product engagement areas in existing designs have been preserved with the dual direction design. The dual direction paddlewheel allows for the consolidation of rotation specific designs into a single part, thereby eliminating costs associated with carrying multiple single direction paddlewheels as well as tooling and manufacturing costs for multiple paddlewheel designs.